

Abstract of the Disclosure

A fuel cell power generation system comprises a hydrogen reservoir that can occlude non-used hydrogen discharged from a fuel cell, and release the same. The hydrogen reservoir has a first storage section comprising an easily hydrogen occluding first hydrogen occlusion material, and a second storage section comprising an easily hydrogen releasing second hydrogen occlusion material. The non-used hydrogen from the fuel cell is once occluded in the first storage section, then the hydrogen obtained by releasing the occluded hydrogen is transferred to and occluded by the second storage section. When the fuel cell starts up, the occluded hydrogen is released from the second storage section, and supplied to the fuel cell.